

THE GENUS PACHYBRACHIUS IN THE UNITED STATES AND CANADA WITH THE DESCRIPTION OF TWO NEW SPECIES (HEMIPTERA: LYGÆIDÆ)

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GENUS PACHYBRACHIUS HAHN

- Pachybrachius* Hahn, 1826, Icon. Mon. Cincium, fasc. I, No. 18;
Barber, 1939, Sci. Surv. Porto Rico and Virgin Islands 14:
351; China, 1943, in the Generic Names of British Insects,
Part 8, p. 239.
- Orthæa* Dallas, 1852, List Hemip. Brit. Mus., Vol. 2, p. 580 (in part); Van Duzee, 1917, Cat. Hemip. No. Amer., p. 183;
Barber, 1918, Psyche 25, 76; Blatchley, 1926, Heterop. E. No. Amer., p. 397; Bueno, 1946, Entom. Amer. 26: 66, 79.
- Pamera* Say, 1832, Hemip. No. Amer., p. 16 (in part); Le Conte, Compl. Writ., Vol. 1, p. 333 (in part); Stal, 1874, Enum. Hemip., Pt. 4, p. 147 (in part).

Characters of the genus: Body elongate, narrow, either nude or very slightly pilose. Head slightly exserted, base of head most often, rather suddenly contracted, postocular margin usually nearly equal to the preocular margin to base of the antenna, much broader across eyes than anterior margin of the pronotum. Antennæ slender; basal segment shorter than head, surpassing apex of head, usually by nearly one-half of its length. Basal segment of rostrum shorter than head. Pronotum strongly constricted at middle or just behind middle; anterior lobe narrower and usually never more than doubly longer than the posterior lobe; collar distinct; posterior margin fairly straight. Corium finely punctate; clavus punctate in irregular series. Anterior femora strongly incrassate, provided below with several spines, often arranged in two series.

Type of the genus: *Pachybrachius luridus* (only included species).

This genus is closely related to *Ligyrocoris* from which it differs by the absence of the lunate, strigose vitta on either side of the base of venter. The genus is very widely distributed in the warmer parts of the world.

Five species are recognized from the United States and two new species are added herewith.

Pachybrachius luridus Hahn

Pachybrachius luridus Hahn, 1826, Icon. Mon. Cimicum, fasc. 1, no. 18.

Pamera lurida, Oshanin, Kat. Palaark. Hemip., p. 33; Lethierry and Severin, 1894, Cat. Gen. Hemip., Vol. 2, p. 193.

Orthæa lurida, Parshley, 1923, Ent. News 34: 22; Blatchley, 1926, Heterop. E. No. Amer., p. 398, 400; Bueno, 1946, Entom. Amer. 26: 80; Moore, 1950, Natur. Canad. 77: 14.

Head shining, subequal to the anterior lobe of the pronotum. Basal segment of the antenna exceeds apex of head by less than one-half of its length. Pronotum uniformly dull fuscous, or sometimes the posterior lobe may be slightly paler, finely pilose, deeply, sharply constricted just behind the middle; anterior lobe one-third longer and nearly one-fourth narrower than the posterior lobe. Scutellum equilateral. Commissure one-half as long as scutellum. Corium nearly as long as head and pronotum combined, devoid of a transverse median fascia. Anterior tibia strongly curved. Length 4.50-5.00 mm.

This is an European species collected at Montreal, Canada, by E. R. J. Beaulne, as reported first by Parshley, 1923, and by Moore in 1950. It is possibly an adventitious species as no other records have been published.

Pachybrachius fracticollis (Schilling)

Pachymerus fracticollis Schilling, 1839, Beitr. Z. Entom. 1: 82; Tab. 7, fig. 6.

Pamera fracticollis, Oshanin, 1912, Kat. Palaark, Hemip., p. 33; Lethierry and Severin, 1894, Cat. Gen. Hemip., Vol. 2, p. 192.

Orthæa fracticollis, Parshley, 1923, Ent. News 34: 22; Blatchley, 1926, Heterop. E. No. Amer., p. 400; Bueno, 1946, Entom. Amer. 26: 80; Moore, 1950, Natur. Canad. 77: 14.

Head slightly shining, one-fourth wider than long. Basal segment of antenna exceeds apex of head by one-half of its length. Pronotum nude; anterior lobe but little shorter and one-third narrower than the posterior lobe, the latter testaceous, with five, rather vague, longitudinal fasciæ. Scutellum a little longer than wide. Commissure more than half as long as

scutellum. Corium devoid of a transverse fascia; costal margin much longer than head and pronotum combined. Anterior tibia fairly straight. Length 5.50-6.00 mm.

This is another European species and the data for it are the same as for the preceding species.

Pachybrachius basalis (Dallas)

Rhyparochromus basalis Dallas, 1852, List Hemip. Brit. Mus., Vol. 2, p. 575.

Orthæa basalis Van Duzee, 1917, Cat. Hemip. No. Amer., p. 185; Barber, 1923, Conn. Geol. Nat. Hist. Surv., Bull. 34, p. 727; Blatchley, 1926, Heterop. E. No. Amer., pp. 399, 401; Bueno, 1946, Entom. Amer. 26: 81.

Pamera curvipes Stal, 1874, Enum. Hemip., Pt. 4, p. 148 (NEW SYNONYMY).

Head about one-fourth wider than long, slightly shining. Basal segment of antenna scarcely exceeds apex of head. Pronotum nude, anterior lobe a little longer than the head; one-third longer and nearly one-third narrower than the posterior lobe, the latter fuscous with two central fascia and humeral angles paler. Scutellum almost equilateral. Commissure one-third shorter than scutellum. Corium devoid of a transverse fascia; costal margin straight, equal to head and pronotum combined. Anterior tibia strongly curved. Length 6.50-7.00 mm.

Distribution: Canada through the eastern part of the United States west to Kansas, Texas and into Mexico.

Pachybrachius vincta (Say)

Pamera vincta Say, 1832, Heterop. Hemip. No. Amer., p. 16; Le Conte, 1859, Compl. Writ., Vol. I, p. 333.

Pamera parvula Distant, 1882, Biol. Cent. Amer., Rhynch., Vol. 1, p. 206, Tab. 19, fig. 12.

Orthæa vincta, Van Duzee, 1917, Cat. Hemip. No. Amer., p. 183; Blatchley, 1926, Heterop. E. No. Amer., pp. 398, 400; Bueno, Entom. Amer. 26: 81.

This is the smallest member of the genus occurring in the United States. Head a little longer than anterior lobe of the pronotum. Basal segment of antenna scarcely exceeds apex of the head. Pronotum nude, the two lobes nearly equal. Scutellum nearly equilateral. Commissure equal to the length of scutellum. Corium equal to the length of the head and pronotum com-

bined, a conspicuous, wide, fuscous fascia along the posterior margin, with no median transverse fascia. Anterior tibia gently curved towards base. Length 3.40–4.00 mm.

Distribution: This is very widely distributed throughout the warmer parts of the world from whence it has been described under a variety of names. In the United States it occurs through the southern states, extending its range into Mexico, Central America, South America and the West Indies.

Pachybrachius bilobata (Say)

- Pamera bilobata* Say, 1832, Heterop. Hemip. No. Amer., p. 17; Le Conte, 1859, Compl. Writ. Say, Vol. 1, p. 334; Stal, 1874, Enum. Hemip., Pt. 4, p. 150; Distant, 1882, Biol. Centr. Amer., Rhynch., Vol. 1, p. 207, Tab. 17, fig. 25; Barber, 1914, Bull. Amer. Mus. Nat. Hist. 33: 514.
- Lygæus (Plociomeria) servillei* Guerin, 1857, in La Sagra, Hist. de Cuba, Ins., p. 399; Stal, 1874, Enum. Hemip., Pt. 4, p. 150 (places *servillei* Guerin as a synonym of *bilobata* Say).
- Plociomeria servillei*, Stal, 1862, Entom. Zeit. 23: 312.
- Orthæa bilobata*, Van Duzee, 1917, Cat. Hemip. No. Amer., p. 184; Blatchley, 1926, Heterop. E. No. Amer., pp. 399, 402; Bueno, 1946, Entom. Amer. 26: 81.
- Pachybrachius bilobatus*, Barber, Sci. Surv. of Porto Rico and the Virgin Islands. 14 (3): 552, 553–554.

Say's description is quite accurate so far as the color goes, and he adds in a following note: "This varies considerably in the coloring of the head and thorax, which are sometimes even obscure cinerous, with obsolete, blackish lines, and on the posterior part of the thorax of many specimens are three distinct, black lines."

As mentioned by Say this is quite a variable species, not only as to the degree of infuscation of various parts of the body, as well as the appendages, but also as to the length of the antennæ and the proportional lengths of the two lobes of the pronotum. It should be noted that in the male the anterior lobe is always relatively longer than in the female.

It is apparent that Say's description pertains not only to the more typical form with longer pronotum and antennæ but includes also the darker form with shorter pronotum, antennæ

and heavily infuscated legs. This latter form was later described by Dallas as *Rhyparochromus scutellatus* from North America.

Distribution: Occurs throughout the southern states and widely distributed in the neotropical regions.

Pachybrachius bilobata subspecies *scutellatus* (Dallas);
new status.

Rhyparochromus scutellatus Dallas, 1852, List Hemip. Brit. Mus., Vol. 2, p. 575.

Pamera scutellatus, Stal, Enum. Hemip., Pt. 4, p. 150; Lethierry and Severin, 1894, Cat. Gen. Hemip., Vol. 2, p. 192 (as synonym of *bilobata*).

Rhyparochromus scutellatus Dallas has been considered by various authors as a synonym of *P. bilobata* Say. In order to fix the exact status of Dallas' species the author referred the question to Dr. W. E. China, of the British Museum of Natural History. He very kindly furnished the following information: "There are two distinct species (both males), mounted side by side on the same card and bearing the type label. The original description is apparently based on both specimens, some characters of one and some of the other being included. In these circumstances I presume that we are at liberty to fix either of the two as the type of [*scutellatus*], whichever is convenient." In commenting on the differences between the two specimens he further states, "The other differs from the first [typical *bilobata*] in the shorter anterior lobe of the pronotum and much shorter antennæ, especially the second and third segments. The whole of the anterior femora and the apical (except extreme apex) of the middle and hind femora of this species are dark, brownish black."

The author therefore concludes that Dallas' name, *scutellatus*, must apply to this smaller, darker form, with the shorter antennæ but as it intergrades with *bilobata* it seems advisable to treat it as a subspecies, rather than a distinct species.

Distribution: In the United States this subspecies is more common in the southeastern states as specimens have been seen from Georgia, Florida and Alabama. In the neotropical regions it occurs in Central America and the West Indies.

Pachybrachius albocinctus, new species

Plociomera servillei, Stal, 1862, Entom. Zeit. 23: 312 (not Guerin).

Orthæa servillei, Van Duzee, 1917, Cat. Hemip. No. Amer., p. 184 (not Guerin); Blatchley, 1926, Heterop. E. No. Amer., pp. 399, 403 (not Guerin); Bueno, 1945, Entom. Amer. 26: 80 (not Guerin).

Pachybrachius servillei, Barber, 1939, Sci. Surv. Porto Rico and Virgin Islands, Vol. 14, pp. 352, 354 (not Guerin).

Head, pronotum, scutellum laterally, pleura, for the most part and the venter ferruginous. Corium, for the most part, humeral angles of pronotum, basal three segments of the antenna and bases of femora and all tibiæ, stramineous. Base of the terminal segment of antenna broadly white. Median longitudinal line of the scutellum and maculations of the corium fuscous. Membrane fuliginous, with conspicuous pale veins and apical patch. Body very sparsely pilose.

Head as wide as long; preocular part equal to the remainder of head; postocular margin gently rounded. Antennæ rather short, but little shorter than the pronotum and costal margin of corium combined; lengths of the respective segments are as follows: 20, 45, 35 and 50. Basal segment of rostrum a little longer than basal segment of antenna. Pronotum a little longer than head; anterior lobe one-third longer than the posterior lobe, the latter slightly paler with three rather obscure, longitudinal fasciæ; faintly and sparsely punctate. Scutellum noticeably longer than wide, finely, sparsely punctate on the basal disk, more coarsely punctate along the sides. Clavus with three irregular series of fine punctures. Commissure half as long as scutellum. Incrassate fore femora with several sharp spines arranged in two series on the apical half. Length 4.75 mm.

Much the same color and general appearance of *P. bilobata* and often confused with it. It averages smaller, the antennæ are much shorter in relation to the length of head and pronotum combined; besides which the terminal segment of the antenna has a wide, white, basal ring.

There is considerable question, in the author's mind, whether this may not be the *Pachymerus annulicornis* of Herrich-Schæffer (Wanz. Ins., Vol. 9, p. 208). That author's description of the species is very brief and he mentions no locality.

Distribution: In the United States it is found from southern New York south to Florida and west through Louisiana to Texas. It is widely spread in the neotropical regions where it is known from Mexico, Central America and also from the West Indies where it is a common species.

Holotype: Beaumont, Jefferson Co., Texas, May 23, 1927, H. Notman, United States National Museum Cat. No. 61523. Paratypes, males and females: UNITED STATES: NEW YORK: Greenport, L. Is., July 11, 1948, Roy Latham. MARYLAND: 2, Annapolis, Jan. 23, 1932, H. G. Barber; Plum Point, Aug. 9, 1913, H. G. Barber; 7, Curtis Creek, P. R. Uhler; Bladensburg, Aug. 17, 1913, W. L. McAtee; Branchville, Apr. 10, 1915, W. L. McAtee; Plummer's Island, Mar. 30, 1913, W. L. McAtee; Lakeland, C. F. Baker. DISTRICT OF COLUMBIA: 3, Anacostia, Aug. 22, 1913; 3, Washington, May 16, 1914, July 15, 1914, and July 24, 1907. VIRGINIA: 3, L. Drummond, Sept. 10, 1933, P. W. Oman; Mt. Vernon, June 27, 1915, W. L. McAtee; 7, "Virginia." OHIO: Columbus, Nov. 16, 1916, C. J. Drake. ILLINOIS: Olive Branch, Oct. 1, 1909, W. J. Gerhard; Quincy, 1870; Pulaski, May 20, 1907, W. J. Gerhard. MICHIGAN: Grand Junction, July 15, 1914. MISSOURI: Portageville, Aug. 11, 1939, R. C. Froeschner; St. Louis, Sept. 1910, J. F. Abbott; Quinlan, Feb. 22, 1942. NORTH CAROLINA: Wilmington, Apr. 6, 1914, H. G. Barber. GEORGIA: Myrtle, Mar. 14, 1906, A. A. Girault; St. Simons Is., July 19, 1931, C. A. Frost; 2, Peach Co., June 17, 1943, W. F. Turner; Thomasville, Mar. 13, 1903, T. D. O'Connor. FLORIDA: Ft. Lauderdale, Feb. 18, 1919, Apr. 24, 1928, A. Wetmore; 2, Clearwater, Aug. 2, 1917, M. D. Leonard; 8, Everglade, May 1912, W. T. Davis; 3, Belle Glade, Mar. 22, 1927, June 4, 1927, M. D. Leonard; Canal Point, July 20, 1927, and Gainesville, July 15, 1918, C. J. Drake; Leon Co., Mar. 19, 1903, T. D. O'Connor; Okeechobee, Mar. 7, 1913, W. S. Blatchley; Ocala, Feb. 10, 1923, F. M. Craighead; 8, Paradise Key, Mar. 3, 1919, H. S. Barber; 1, Aug. 31, 1925, T. H. Hubbell; Lake Myaka, Apr. 19, 1939, W. S. Blatchley; Maron Co., Oct. 1, 1938, and Putnam Co., July 30, 1938, Hubbell and Friauff. MISSISSIPPI: Aberdeen, June 26, 1921, Natchez, May 25, 1909, E. S. Tucker. ALABAMA: Coleta, H. H. Smith. TEXAS: College Station, May 20, 1935; Palestine, July 7, 1906, F. C. Bishopp; Victoria, July, J. D. Mitchell; Beaumont, May 24, 1927; 2, Brownsville, June, Snow Coll., Runge, Oct. 24, 1906.

Neotropical: MEXICO: Cordoba, V. C., Apr. 17, 1900, F. Knab; Precidio River, Sin., Sept. 26, 1918, J. A. Kusche; Veno-

dio, Sin., 1918, J. A. Kusche; 2, Vera Cruz, P. R. Uhler; 23, from various parts, intercepted on fruits and vegetables at certain ports in the United States. HONDURAS: Enders, Middleton; "Honduras," July 26–Aug. 2, 1933; 6 intercepted at United States ports on bananas. GUATEMALA: 5 intercepted at United States ports on bananas, etc. PANAMA: 4, Trinidad R.; 4, Panama. COLUMBIA: 3. ECUADOR: 6, Guayaquil. BRAZIL: 1, Benito Prov. WEST INDIES: CUBA: 2, Baragua, May 17, 1932, L. C. Scaramuzza; 2, Camaito, Havana, Aug. 23, 1913, H. Morrison; 2, Camaguay, Baragua, June 5, 1932, Christenson; 6, Cuba, Uhler Coll. JAMAICA: ST. DOMINGO, Mar. 1928. HAITI: Bayeux, Sept. 17, 1925. GRENADA IS.: P. R. Uhler Coll. TRINIDAD: 3. All in the collection of the United States National Museum.

Paratypes contained in collections other than that of the United States National Museum: Snow Insect Collections, University of Kansas: FLORIDA: 41, Deerfield; 14, Royal Palm Park; 6, Lake Placid; 3, Lacoochee; 6, Suwanee Springs; 1, Sebastian; 1, New Smyrna; 1, Morrison Field. LOUISIANA: 4, Burros; 1, Creole. TEXAS: 3, Hidalgo; 1, Cedar Lane. Chicago Natural History Museum: ILLINOIS: Gorham, Aug. 8, 1932, A. B. Wolcott; 8, Olive Branch, Oct. 4, 9, 1909, Bosky Dell, Oct. 27, 1909, W. J. Gerhard. E. O. Esselbaugh collection: FLORIDA: Homestead, Jan. 13, 1946. James A. Slater collection: LOUISIANA: 3, Harahan, Aug. 14–19, 1944.

***Pachybrachius occultus*, new species**

Very sparsely pilose. Head, anterior lobe of pronotum, except the pale collar, margins of scutellum, ferruginous; anterior margin of the pronotum, posterior lobe of pronotum, anterior two-thirds of corium, basal two segments and most of third segment of antennæ and the legs testaceous; central disk of scutellum, ill-defined, postmedian, transverse fascia of corium, apex of third and all of terminal segments of antennæ fuscous; a large pre-apical, subtriangular, white spot on the corium; membrane fuliginous with faint pale veins and an apical, sordid, white spot.

Head equally wide as long; preocular part but little longer than the remainder of the head; base of head behind the eyes gradually contracted, this margin very nearly straight, a little shorter than preocular margin to the base of the antenna. Antenna long, almost twice as long as head and pronotum combined; basal segment exceeds apex of head by one-half of its length; lengths of the respective segments as follows: 30, 60, 55 and 60.

Pronotum little longer than the head, anterior lobe smooth, not quite twice as long as posterior lobe and nearly one-fourth narrower; posterior lobe sparsely, finely punctate, humeral angles smooth, pale. Scutellum one-fifth longer than wide and about one-fifth shorter than pronotum, very finely, sparsely punctate on the disk, more coarsely punctate along the sides. Commissure less than half as long as scutellum. Clavus with about two irregular rows of fine punctures. Corium sparsely punctate; costal margin not concavely sinuate. Incrassate fore femora with a rather prominent preapical spine, preceded and followed by a few smaller spines. Length 5.50 mm.

Holotype male: Kimberly, Idaho, Oct. 3, 1930, David E. Fox, United States National Museum Cat. No. 61524. Paratypes, males and females: IDAHO: 1, Tuttle, June 16, 1939; 1, Twin Falls, July 29, 1930, David E. Fox; nymph, Hansen, June 1, 1929. UTAH: 1, Randolph, Aug. 21, 1942, G. F. Knowlton, R. S. Roberts; 1, Duchesne, Oct. 3, 1937, G. F. Knowlton, F. C. Harmston. MONTANA: Hobson, Aug. 21, 1922, C. C. Sperry. All in the collection of the United States National Museum. COLORADO: 1, Mesa, July 14, 1937, B. Patterson, J. H. Quinn, in the Chicago Natural History Museum.

This species is totally unlike any other member of the genus. The Montana specimen has the base of the head, anterior lobe of the pronotum and the scutellum, fuscous.

KEY TO PACHYBRACHIUS HAHN¹

1. Corium devoid of a transverse, postmedian fuscous fascia 2
Corium with a more or less conspicuous postmedian, transverse, fuscous fascia 5
2. Apical margin of corium with a conspicuous, broad, fuscous fascia. Head one-third wider than long. Anterior lobe of pronotum one-fourth longer than posterior lobe. Scutellum one-fourth longer than wide. Antenna evidently longer than costal margin of corium. Body nude. Small species, 3.25-4.00 *vineta* (Say)
Apical margin of corium devoid of a conspicuous fuscous fascia 3
3. Anterior tibia of male straight towards base. Scutellum but little shorter than pronotum, longer than wide. Head equilateral. Preocular part of head equal to the remainder. Head longer than anterior

¹ Three United States species which were considered by Stal to belong to *Pamera* and so listed by Lethierry and Severin, 1894, Cat. Gen., Vol. 2, p. 194, belong to other genera as follows: *P. nitidicollis* and *P. setosa* Stal, 1874, Enum. Hemip., Pt. 4, p. 150, belong to *Ligyrocoris*; *Rhyparochromus vicina* Dallas, 1852, List Hemip. Brit. Mus., Vol. 2, p. 576, is a synonym of *Ligyrocoris sylvestris* (L.) teste Dr. W. E. China in correspondence.

- lobe of pronotum. Antenna very nearly the length of the costal margin *fracticollis* (Schilling)
- Anterior tibia of male strongly curved. Scutellum much shorter than pronotum. Head subequal to anterior lobe of pronotum. Antenna shorter than costal margin 4
4. Preocular part of head about half as long as remainder. Scutellum equilateral. Commissure less than half as long as scutellum. Basal segment of antenna distinctly longer than basal segment of rostrum *basalis* (Dallas)
- Preocular part of head more than half as long as remainder. Scutellum longer than wide. Commissure half as long as scutellum. Antenna a little shorter than costa, basal segment equal to basal segment of rostrum *luridus* (Hahn)
5. Costal margin of corium anteriorly straight. Transverse fascia of corium often ill-defined; a large preapical, subtriangular, white spot. Head equilateral. Basal segment of antenna equal to preocular part of head **occultus**, new species
- Costal margin of corium gently, sinuately, arcuated opposite apex of scutellum. Transverse postmedian, fuscous, fascia of corium distinct 6
6. Terminal segment of antenna broadly white at base. Head gradually contracted back of eyes, postocular margin gently rounded. Antenna commonly shorter than pronotum and costal margin combined. Scutellum paler laterally **albocinctus**, new species
- Terminal segment of antenna entirely fuscous. Head more abruptly contracted back of eyes, postocular margin fairly straight. Antenna long, but little shorter than pronotum and costal margin combined. Scutellum unicolorous. Anterior femora testaceous *bilobatus* (Say), s. s.
- Antenna shorter. Anterior femora fuscous, with base and apex pale. Posterior lobe of pronotum with conspicuous, longitudinal, fuscous fasciæ *bilobatus* subspecies *scutellatus* (Dallas)